

In the Claims

Claims 1-18 (Canceled)

19. (Previously Amended) An antibody produced against a recombinant *Cryptosporidium* cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, and binding to said recombinant or a native cryptopain antigen depicted by said amino acid sequences SEQ ID Nos.: 4-6.

20. (Previously Amended) The antibody of Claim 19 binding to the fragment identified by the amino acid sequence SEQ ID NO: 5.

21. (Previously Amended) The antibody of Claim 19 binding to the fragment identified by the amino acid sequence SEQ ID NO: 6.

22. (Previously Presented) The antibody of Claim 19, wherein the antibody is monoclonal or polyclonal.

23. (Previously Amended) The antibody of claim 19 detecting a presence of *Cryptosporidium* cryptopain antigen by formation of an anti-cryptopain antibody-cryptopain antigen complex.

24. (Previously Amended) The antibody of claim 23 wherein the antibody is polyclonal.

25. (Previously Amended) The antibody of claim 23 wherein the antibody is monoclonal.

Claims 26-39 (Canceled).

40. (Previously Amended) A polyclonal anti-cryptopain antibody suitable for treatment of *Cryptosporidium* infections wherein said antibody is administered to a person in need of such treatment, said antibody produced against a recombinant *Cryptosporidium* cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, said antibody binding to said cryptopain antigen,

wherein said antibody is administered in an amount effective to provide immunity or to inhibit existing *Cryptosporidium* infection.

41. (Currently Amended) The antibody of claim 40 raised against [[an]] the amino acid sequence depicted by SEQ ID NO: 4.

42. (Previously Presented) The antibody of claim 41 raised against a cryptopain fragment depicted by SEQ ID NO: 5.

43. (Previously Presented) The antibody of claim 41 raised against a cryptopain fragment depicted by SEQ ID NO: 6.

44. (Previously Amended) A polyclonal or monoclonal anti-*Cryptosporidium* antibody suitable for detecting *Cryptosporidium* in a biological or environmental sample wherein said antibody is contacted with a biological sample specimen or with an environmental sample suspected to be infected with *Cryptosporidium*, wherein said antibody is produced against a recombinant *Cryptosporidium* cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 4 or a fragment thereof depicted by an amino acid sequence SEQ ID NO: 5 or SEQ ID NO: 6, and binding to said recombinant or a native cryptopain antigen depicted by said amino acid sequences SEQ ID NOs.: 4-6.

45. (Previously Amended) The antibody of claim 44 which detects a formation of an anti-cryptopain antibody/cryptopain antigen complex in the biological or environmental sample.

46. (Previously Amended) The antibody of claim 45 wherein the anti-cryptopain antibody/cryptopain antigen complex is detected with an enzyme-linked immunoassay or with a radioactive assay.

47. (Previously amended) The antibody of claim 45 wherein the formation of the anti-cryptopain antibody/cryptopain antigen complex is detected by solid phase method, with double antibody assay, sandwich double antibody assay or triple antibody assay or ELISA.

48. (Previously Amended) The antibody of claim 45 which detects a presence of the anti-cryptopain antibody/cryptopain antigen complex of *Cryptosporidium* in a tissue or fluid biological sample.

49. (Currently amended) The antibody of claim 48 which detects a presence of the anti-cryptopain antibody/cryptopain antigen complex in a stool, urine, saliva, blood or serum sample specimen.

50. (New) An antibody produced against a recombinant *Cryptosporidium* cryptopain antigen depicted by an amino acid sequence SEQ ID NO: 5 binding to recombinant or a native cryptopain antigen depicted by said amino acid sequence SEQ ID No: 5.

51. (New) A polyclonal anti-cryptopain antibody suitable for treatment of *Cryptosporidium* infections wherein said antibody is administered to a person in need of such treatment, said antibody produced against a recombinant *Cryptosporidium* cryptopain antigen

depicted by an amino acid sequence SEQ ID NO: 5, said antibody binding to said cryptopain antigen,

wherein said antibody is administered in an amount effective to provide immunity or to inhibit existing *Cryptosporidium* infection.